

## Curriculum Summary

**Subject:** Mathematics

Year 7	Year 8	Year 9	Year 10	Year 11
<p><b>Algebra:</b> Students will explore sequences. They will understand and use algebraic notation. They will also understand equality and equivalence and have an introduction to proof.</p>	<p><b>Algebra:</b> Students will work in the Cartesian plane. They will understand and create linear and non-linear graphs. Students will expand Brackets and begin factorising, as well as working on algebraic equations and inequalities.</p>	<p><b>Algebra:</b> Students will look at straight line graphs and practise forming and solving equations. They will expand and factorise quadratic expressions.</p>	<p><b>Algebra:</b> Students will convert recurring decimals to fractions and learn about quadratic sequences. They will practise algebraic manipulation with indices and learn more about algebraic fractions.</p>	<p><b>Algebra:</b> Students will study the characteristics of straight-line graphs and implications. They will learn about features of quadratic and other non-linear graphs, solving quadratic equations, completing the square, changing the subject, functions, formal algebraic proof, quadratic inequalities and iteration.</p>
<p><b>Number:</b> Students will develop their knowledge of place value, ordering integers and decimals. They will learn about fractions, decimal and percentage equivalence. Students will tackle problem solving with addition, subtraction, multiplication, and division. They will also understand operations with negative numbers and fractions, as well as prime numbers.</p>	<p><b>Number:</b> Students will develop their knowledge of and skills in multiplying and dividing fractions. They will increase and decrease by percentages and fractions and explore standard index form.</p>	<p><b>Number:</b> Students will find original amounts after a percentage change or repeated percentage change. They will learn about financial maths and prime factorisation with highest common factors and lowest common multiples.</p>	<p><b>Number:</b> Students will continue to learn about percentages and interest, surds, bounds, indices and roots.</p>	<p><b>Number:</b> Students will learn about the product rule for counting.</p>
<p><b>Shape:</b> Students will develop geometric reasoning skills, including a knowledge of basic angle facts.</p>	<p><b>Ratio and Proportion:</b> Students will continue learning about ratio and scale, multiplicative change and direct proportion.</p>	<p><b>Ratio and Proportion:</b> Students will solve problems involving ratio and proportion. They will also learn about rates of change.</p>	<p><b>Ratio and Proportion:</b> Students will explore ratios and fractions in more depth and solve ratio problems with percentages and algebra.</p>	<p><b>Ratio and Proportion:</b> Students study complex direct and inverse proportion problems as well as further rates of change.</p>
	<p><b>Shape:</b> Students will identify angles in parallel lines and polygons. They will also calculate the circumference of circles, the area of trapezia, the area of circles and line symmetry.</p>	<p><b>Shape:</b> Students will learn about volume and surface area, loci and constructions, congruency, rotation and translation, Pythagoras' theorem, enlargement and similar triangles.</p>	<p><b>Shape:</b> Here students learn about similarity, congruent triangles, trigonometry, bearings, mensuration with circles, circle theorems and vectors.</p>	<p><b>Shape:</b> Students learn and apply further circle theorems.</p>
<p><b>Data:</b> Students will explore data sets and have an introduction to probability.</p>	<p><b>Data:</b> Students will continue to develop their understanding of how to represent data, table and probability. They will explore the data handling cycle, averages and averages from tables.</p>	<p><b>Data:</b> Students will apply their knowledge and skills to solving problems with data.</p>	<p><b>Data:</b> Students will study further probability, conditional probability with tree diagrams and Venn Diagrams. They will also learn about further representation of data, including histograms.</p>	<p><b>Data:</b> Students develop their knowledge of further representation of data.</p>